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REMARKS

Presently all claims 1 to 14 have been rejected for the reasons noted in the office action dated 6/28/2005. Claim 1 has been amended and claim 10 has been canceled.

1. Claims 1, 3, 4, 6, and 8 to 9 are rejected under 35 U.S.C. §103(a) as being unpatentable over McDaniel in combination with Dabby by the Examiner based on comments on Page 2 of the Office Action.

A determination as to whether a valid rejection has been made begins with ascertaining that the PTO policy regarding the guidelines laid down by the Supreme Court in Graham v. John Deere, 148 USPQ 459 (Sup. Ct. 1966) has been carried out. The PTO policy is simply that the patent Examiners carry the responsibility of making sure that the standard of patentability enunciated in this decision is applied in each case.

The proper test of obviousness is found in the four Graham inquiries: These inquiries are determining the scope and content of the prior art, ascertaining the differences between the prior art and the claims at issue, resolving the level of ordinary skill in the pertinent art, and considering objective evidence present in the application indicating obviousness or non-obviousness. The issue to be resolved is whether these inquiries have been correctly applied, considered and resolved.

It is further noted that the obviousness rejection should be directed at the claimed invention of the patent application in light of the teachings of the references, not that the claimed invention could be used on the cited references.

It is therefore asserted that the rejection of the claims is in error. The claimed invention is not obvious in light of the prior art cited by the Examiner. Applicant respectfully submits that the present invention is not made obvious by the combination of references because the combination has failed to satisfy the "every element" requirement. Moreover, the present invention is patentable over the cited references because the combination provided no suggestion or motivation to modify the reference teachings so as to produce the present invention.

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The present invention (Claim 1) comprises (1) at least one coherent light source of a suitable wavelength; (2) at least one oligomode optical waveguide coupled to said source, wherein said waveguide has a low mode transmission at said wavelength; and (3) at least one means to selectively leak irradiation of said wavelength from at least one preselected position along a length of said waveguide so that biological tissue and organisms are caused to be stimulated.

As noted in Claim 1 the light source is a coherent light source that inputs the light into an oligomode optical waveguide having at least one source for leaking radiation along a length of the waveguide to stimulate tissue and/or organisms.

The McDaniel reference notes that the light source is a preferred “multichromatic source” for the treatment of dermaological conditions. Col. 3, lines 27 and 67. It notes that an optical waveguide may be coupled to the light source such as an LED. Col. 10, line 56 and Figure 17C. Figures 19 and 20 further illustrate the use of optical fibers with the LEDs. Col. 17, lines 24 to 54. Col. 20, lines 32 to 54, discuss the invention as applied to animal and plant cells to produce collagen. The McDaniel reference fails to disclosure a “source for leaking radiation along the length of the waveguide” nor any reason why light loss along the transmission line could possibly not be detrimental to the operation of the McDaniel invention. Rather one skilled in the art would understand that the optical fibers used by the McDaniel reference output the radiation from a terminal end of the optical fiber and losses along the way would decrease the efficiency of the transmission medium (optical fibers). There is no teaching otherwise.

Although the Dabby reference mentions the word “oligimode” waveguide, Col. 5, line 27, there is no other teaching except away from such a structure. Dabby is concerned with a single mode fiber or attenuation of a second order mode to result in a single mode fiber. Col. 6, lines 21 to 29. It does go provide a preliminary acceptance of the term as compared to single mode fibers or multimode fibers.

Clearly there is no motivation to combine these two references, without first having the present invention before them. McDaniel does disclose an optical fiber for transferring light from distant sources to a remote treatment zone, but without any means

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for leaking radiation from along the length of the fiber. Dabby discloses single mode fibers but only mentions oligimode fiber in passing, primarily in the context communications through fiber optics.

As to claim 3, the above traverse of this rejection is incorporated herein. The use of a cladded oligimode fiber is claimed. But McDaniel teaches away from using a clad fiber in the oligimode. Col. 6, lines 21 to 29.

As to claim 4, the above traverse of this rejection is incorporated herein. The use of a cladded oligimode fiber is claimed. But McDaniel teaches away from using a clad fiber in the oligimode. Col. 6, lines 21 to 29. Further neither McDaniel nor Dabby disclose the use of multiple sources for leaks.

As to claim 6, biostimulation of organic tissue, the above traverse is incorporated by reference. Again, Dabby teaches away from using an oligomode optical fiber and McDaniel does not disclose using an oligimode fiber having sources of radiation leaks along its length for such stimulation.

As to claims 8 and 9, biostimulation of organic tissue, the above traverse is incorporated by reference. Again, Dabby teaches away from using an oligomode optical fiber and McDaniel does not disclose using an oligimode fiber having sources of radiation leaks along its length for such stimulation. Further, the clad fiber of Dabby is directed at eliminating higher order modes, which in his use are above the second mode. Col. 6, lines 21 to 29.

2. Claims 2, 5 and 7 are rejected under 35 U.S.C. §103(a) as being unpatentable over McDaniel in combination with Dabby as applied to claims 1, 3 to 4, 6, and 8 to 9, and further in combination with Mori based on comments on Page 2 of the Office Action.

The above traverse is incorporated by reference.

Mori discloses a radiation cloth having multiple optical fibers mounted thereon with a plurality of sources of radiation on each fiber for the external treatment of the human body. Mori does not disclose the use of an oligomode fiber and further the use of a cloth holding the optical fibers restricts the usage of the invention to the outside of the

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body. The present invention is directed at the stimulation of biological tissue which is not restricted to just the outside of the body as would be required by the invention of Mori.

Claim 1 relates to the treatment of biological tissues and organisms. Claim 6 relates to organic tissue. Claim 11 being dependent off of Claim 6 is directed to healing of a large wound as being organic tissue. Claim 12, as Claim 14, being dependent off of Claim 6, is directed at enhancing seed or seedling germination and growth. Claim 13 being dependent off of Claim 6 is directed at enhancing animal fertility and growth.

The Mori reference is directed at the application of light through optical fibers held by a cloth or plate or sheet onto selected area of the human body for beauty treatments and for good health as noted on Col. 1, lines 38 to 41.

As seen in Figure 1 of the persnt invention, a single optical fiber with decouplers is shown for treating wounds. A bandage or like is applied over the wound area for protection. Figure 2 illustrates the invention having a plurality of separate fibers for treating seeds. Figure 3A shows a fiber embedded in the floor of a barn for treating animals. Figure 4 illustrates the use of the fibers for treating seedlings. As seen in these figures the fibers are not attached to any device for holding them in a preferred position but freely associated with the treated object. Claim 1 was amended to indicated that the fibers are freely placed near the treated object.

It is therefore asserted that claims 2, 5 and 7 are patentable over the above art for the reasons noted.

3. Claim 10 is rejected under 35 U.S.C. §103(a) as being unpatentable over McDaniel in combination with Dabby as applied to claims 1, 3 to 4, 6, and 8 to 9, and futher in combination with Diamantopoulos et al. based on comments on Page 3 of the Office Action.

Cancel 10 has been canceled without prejudice.

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4. Claim 11 is rejected under 35 U.S.C. §103(a) as being unpatentable over McDaniel in combination with Dabby and Prescott based on comments on Page 3 of the Office Action.

The prior traverse is incorporated by reference.

The “bandage” of Prescott has a plurality of laser/LED sources therein. This a direct irradiation approach to treating wounds, where optical of any sort are of no import. Without the knowledge of the present invention, there is little to connect this with a ‘communications’ fiber or an optical transit fiber for multichromatic light irradiation. There is no oligomode optical fiber connected to the laser/LED sources and thus no source(s) of leaking radiation thereon. There is no need for an optical fiber in Prescott since the laser/LED sources are on the skin directly and multiple sources are disclosed.

Dabby notes an oligomode fiber but teaches away from such by focusing on single mode fibers and making dual mode fibers into single mode fibers.

McDaniel discusses wound healing on Col. 11, lines 17 to 54, in particular. The use of optical fibers in the process of wound healing are not disclosed by McDaniel. The use of optical fibers being oligomode fibers with sources of leaking radiation along the length are not shown nor reasonably implied.

In claim 11, the optical fiber is placed on the wound before it is covered and both the wound and the fiber are covered by the dressing. None of the references disclose this procedure either singly or in combination.

5. Claim 13 is rejected under 35 U.S.C. §103(a) as being unpatentable over McDaniel in combination with Dabby and further in combination with Sullivan based on comments on Page 3 of the Office Action.

The prior traverse is incorporated by reference.

The McDaniel reference indicates the use of optical fibers to guide the radiation emitted from a plurality of LEDs to a light directing source. These optical fibers do not have leakage as shown in the present invention and are not placed in or near the treated tissue, seeds, organisms, etc. Sullivan merely discloses the use of multiple LEDs sources

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to treat animals such as humans at a distance. There is no teaching therein for inputting the LED light into optical fibers having leaking sources. Sullivan uses LEDs without optical fibers. In fact McDaniel and Sullivan present alternate, competing methods of providing wound healing, there really is no reason to combine them and taken together they do not disclose or imply that the specific device and method of biostimulation of the present invention could be arrived at without extreme experimentation if one was not already informed as to the present invention.

It is therefore respectfully asserted that claim 13 is patentable over this combination.

6. Claims 1 to 14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 to 4 of U.S. Patent 6,830,580.

A terminal disclaimer is attached.

With these changes and remarks it is believed that the disclosure is now in condition for allowance. Reconsideration is respectfully requested. An early and favorable response is earnestly solicited. Thank you.

Respectfully submitted,



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